

IMPULSE-REACTION TYPE TURBINES

183

maximum diameter running through from end to end. The intermediate pressure reaction blading is carried in two hollow drums shrunk and keyed on to the shaft. The low-pressure blading is carried on a series of discs whose rims butt against each other, and whose hubs are shrunk and keyed to the shaft, a nut at the end of the discs locking the whole. It will be seen

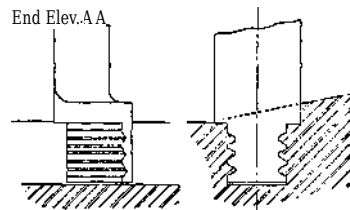
Section, thro A A

REACTION BLADING

$W < k \cdot D$ (stance)

piece separate

FOR BLADES IN CYLINDER & ROTOR SUBJECT TO ORDINARY STRESS



Blade & Distance piece

separate

FOR BLADES IN ROTOR. SUBJECT TO

GREATER STRESSES

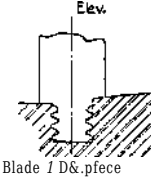
Front. End Elev.

Blade & Dis*

pieces Combine

FOR BLADES IN ROTOR SUBJECT TO GREATEST STRESSES.

IMPULSE BLADING
v. Front Elev.



separate.
FOR BLADES IN ROTOR SUBJECT TO ORDINAL STRESS

Blade & Distance piece,

combined

FOR BLADES IN ROTOR SUBJECT TO

GREATEST STRESSES

Fig. 37.—Types of Blading used in Richardsons, Westgarth Impulse-reaction Turbines

that the general rotor construction is not dissimilar to that commonly used in multi-stage impulse practice.

The various types of impulse and reaction blading adopted by this firm are shown in fig. 37. In their latest machines the impulse blades are of rustless iron or steel. The reaction blade material is bronze, and the blades are tipped at the ends and single- or double-laced according to length.

The design of the glands, dummies, &c., follows Messrs. Parsons' practice, from whom Messrs. Richardsons, Westgarth have held a licence since 1903.